

## **REMARKS / DISCUSSION OF ISSUES**

Claims 1 and 3-25 are pending in the application upon entry of the present Amendment. Claims 1, 11, 17, 21 and 25 are the independent claims.

### **Allowable Subject Matter**

Applicants gratefully acknowledge the indication of allowability of the subject matter of claims 2-10 and 21-24 over the art of record.

New claim 25 recites the features of claims 1 and 2, and the dependency of claims 3-10 has been amended, as needed, to depend from claim 25. As such, Applicants respectfully submit that claims 3-10 and 25 are in condition for allowance.

Claims 21-24 remain rejected under 35 U.S.C. § 112, ¶2, and are not amended. Rather, Applicants respectfully submit that the rejection of claims 21-24 is improper and should be withdrawn for reasons set forth below.

### **Rejections under 35 U.S.C. § 101**

Claims 11-20 are rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. For at least the reasons set forth below, Applicants respectfully submit that this rejection is improper and should be withdrawn.

#### **i. Claim 11**

Applicants rely on recent precedent in support of their position that claim 11 qualifies as statutory subject matter. Notably, “The Supreme Court, however, has enunciated a definitive test to determine whether a process claim is tailored narrowly enough to encompass only a particular application of a fundamental principle rather than to pre-empt the principle itself. A claimed process is surely patent-eligible under § 101 if: (1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing... The machine-or-transformation test is a two-branched inquiry; an applicant may show that a process claim satisfies § 101 either by showing that

his claim is tied to a particular machine, or by showing that his claim transforms an article." *In re Bilski*, 545 F.3d 943 (Fed. Cir. 2008) (Emphasis added).

Claim 11 has been amended to particular tie to a host analyzer. Notably, claim 11 features "...using the set of rules and relationships for mining by a host analyzer the selected data set to generate a mined data set..."

In a representative embodiment, the host analyzer 105 comprises certain modules, devices, interfaces and a processor, such as depicted in Fig. 7. Thus, the mining of selected data by the host analyzer is tied to a particular apparatus, and therefore is surely patentable subject matter. Accordingly, withdrawal of the rejection of claim 11 is respectfully requested. Moreover, claims 12-16, which depend immediately or ultimately from claim 11, are patentable for at least the same reasons.

#### ii. Claim 17

Claim 17 recites:

*A packet-network analyzer system stored on a computer-readable medium, the analyzer comprising:*

*logic configured to receive raw digital data that is derived from a packet-network-under-test;*

*logic configured to generate a selected data set from raw digital data of the packet-network-under-test;*

*logic configured to generate a normalized data set from the selected data set;*

*logic configured to process the normalized data set in a neural network to generate a set of rules and relationships;*

*logic configured to use the set of rules and relationships for mining the selected data set to generate a mined data set; and*

*logic configured to use the mined data set to characterize the packet-network-under-test.*

The Office Action asserts that claim 17 is unpatentable because the computer readable medium includes signals and printed matter, and refers Applicants to paragraph [0050] of the filed application. Applicants respectfully submit that the rejection of claim 17 is misguided, and that the subject matter is statutory. Notably, the Office Action seemingly implies that claim 17 is directed to transitory signals, based on that which is disclosed in a paragraph of the specification. However, from the plain meaning of the claim, *a packet-network analyzer system* stored on a computer readable medium and comprising various logic that effects certain functions, comprises the subject matter of claim 17. There is no reference to a signal in the claim. Moreover, the Office Action fails to recite any basis in law for the assertion that a signal is facially unpatentable, and fails to point out specific features of the claim that are allegedly non-statutory transitory signals. Furthermore, claim 17 is directed to a system, and therefore Applicants respectfully submit that claim 17 properly qualifies as a machine at least, which is clearly embraced as patentable subject matter.

The Office Action further asserts:

“The claims are also drawn to non-statutory functional descriptive material because the claimed logic is not being executed by a processor, for example.”

Again, the Office Action fails to provide any basis supporting this assertion, and as such, the rejection is improper for at least this reason. Moreover, and as noted above, claim 17 properly qualifies as a machine at least, which is clearly embraced as patentable subject matter.

For at least the reasons set forth above, Applicants respectfully submit that the rejection of claim 17 is improper and should be withdrawn. Therefore, claim 17 is patentable, as are claims 18-20, which depend immediately and ultimately from claim 17, and for at least the same reasons.

#### **Rejections under 35 U.S.C. § 112, ¶2**

Claims 21-24 were rejected under 35 U.S.C. § 112, ¶2 as being indefinite for

allegedly failing to particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention. Notably, the Office Action asserts that the indefiniteness is because "...software is used to provide the claimed means. The CAFC has held that the specification must disclose the particular structure that is used to perform the claimed function. (see pages 24-26 of *Blackboard v. Desire2Learn*)."

The undersigned has reviewed *Blackboard, Inc. v. Desire2Learn, Inc.*, 574 F.3d 1371 (CAFC 2009). While issues of indefiniteness are raised, Applicants respectfully submit that the so-called 'black-box' issues raised in *Blackboard* are not germane to claims 21-24, for at least the reasons set forth below.

Notably, in *Blackboard*, the CAFC held:

"It is well settled that "if one employs means-plus-function language in a claim, one must set forth in the specification an adequate disclosure showing what is meant by that language." *In re Donaldson Co.*, 16 F.3d 1189, 1195 (Fed. Cir. 1994) (en banc). If the specification does not contain an adequate disclosure of the structure that corresponds to the claimed function, the patentee will have "failed to particularly point out and distinctly claim the invention as required by the second paragraph of section 112," which renders the claim invalid for indefiniteness. *Id.*

As an example of the operation of the access control manager, Blackboard explains that the access control manager assigns an access and control level for the quiz file based on a user's course role by creating an access control list. The access control list created by the access control manager associates user roles with the levels for course data files. For example, it might provide that teachers can create, view, and edit a quiz, while students can only submit a completed quiz. But that is not a description of structure; what the patent calls the "access control manager" is simply an abstraction that describes the function of controlling access to course materials, which is performed by some undefined component of the system. The ACM is essentially a black box that performs a recited function. But how it does so is left undisclosed." *Blackboard, Inc. v. Desire2Learn, Inc.*, at 1382.

Claim 21 recites:

*A packet-network analyzer system stored on a computer-readable medium, the analyzer comprising:*  
*means for receiving raw digital data that is derived from a packet-network-under-*  
*test;*

*means for generating a selected data set from raw digital data of the packet-network-under-test;*

*means for generating a normalized data set from the selected data set;*

*means for processing the normalized data set using a neural network to generate a set of rules and relationships;*

*means for using the set of rules and relationships for mining the selected data set to generate a mined data set; and*

*means for using the mined data set to characterize the packet-network-under-test.*

In a representative embodiment described in connection with Figs. 1,4 and 7, packet-network analyzer system comprises a the host analyzer 105, which comprises hardware as well as software elements (see paragraph [0044] of the filed application). In another representative embodiment, the host analyzer in hardware such as an application specific integrated circuit (ASIC), a programmable gate array (PGA) or a field programmable gate array (FPGA) (see paragraph [0051] of the filed application).

The host analyzer comprises inter alia, a processor 107, memory 705, one or more input output (I/O) devices or peripherals 715, a network interface 720 and a local interface 725. There is application software 730 can be embodied in computer readable medium and comprises elements that are functionally equivalent to respective blocks described in connection with Fig. 4 of the filed application. (Kindly refer to Fig. 7 and paragraphs [0044] through [0051] for additional details of the host processor 105.)

Applicants respectfully submit that a review of the noted embodiments of the filed application provides ample disclosure of hardware and software corresponding to the function set forth in claims 21-24 to satisfy the requirements of 35 U.S.C. § 112, ¶2. Therefore, Applicants respectfully submit that the rejection of claim 21-24 under 35 U.S.C. § 112, ¶2 is improper and should be withdrawn.

**Rejection under 35 U.S.C. § 103(a)**

A *prima facie* case of obviousness has three requirements. First, the prior art relied upon, coupled with the knowledge generally available in the art at the time of the invention, requires some reason that the skilled artisan would modify a reference or to combine references. *Princeton Biochemicals, Inc. v. Beckman Coulter, Inc.*, 411 F.3d 1332 (Fed. Cir. 2005). The Supreme Court has, however, cautioned against the use of "rigid and mandatory formulas" particularly with regards to finding reasons prompting a person of ordinary skill in the art to combine elements in the way the claimed new invention does. *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727 (2007). Second, the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the same time the invention was made. In other words, a hindsight analysis is not allowed. *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200. Lastly, the prior art reference or combination of references must teach or suggest all the limitations of the claims. *In re Wilson*, 424 F.2d 1382 (C.C.P.A. 1970).

In *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727; 82 U.S.P.Q.2D 1385 (2007), the Court stated "A factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning. See *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966) (warning against a "temptation to read into the prior art the teachings of the invention in issue" and instructing courts to "guard against slipping into the use of hindsight" (quoting *Monroe Auto Equipment Co. v. Heckthorn Mfg. & Supply Co.*, 332 F.2d 406, 412 (CA6 1964)))." Moreover, if there is no suggestion to combine the teachings of the applied art, other than the use of Applicant's invention as a template for its own reconstruction, a rejection for obviousness is improper. *Ex parte Crawford, et al.* Appeal 20062429, May 30, 2007. In furtherance to the need for the suggestion to combine the teachings of the applied art, it is established that rejections on obviousness grounds cannot be sustained by mere conclusory statements: instead there must be some articulated reasoning with some

rational underpinning to support the legal conclusion of obviousness. *KSR Int'l v. Teleflex*, 127 S. Ct. at 1741.

a. The rejection of claim 1 in view of *Bonney, et al.*, *Bahadiroglu* and *Barrillaud, et al.*

**i. Claim 1**

Claim 1 is drawn to a packet-network analyzer system and features:

*“...a host analyzer communicatively coupled to a first client analyzer, wherein the host analyzer incorporates a neural processing module to process raw digital data provided to the host analyzer by the first client analyzer for characterizing a packet-network-under-test that is connected to the first client analyzer.”*

In rejecting claim 1 under 35 U.S.C. § 103(a), the Office Action concedes that *Bonney, et al.* fails to disclose “using a neural processing module to process the information.” At the outset, Applicant respectfully submits that this is not what is claimed. Rather, the emphasized portion of claim 1 reveals that the host analyzer incorporates a neural processing module.

The Office Action turns to *Bahadiroglu* in an attempt to cure the deficiency of the primary reference applied in the Office Action. The Office Action states:

“Bahadiroglu discloses a neural processing module **48B** that is used as a part of a network analyzer **48 [figure 6A].**” (Emphasis in original.)

In describing Fig. 6A, at paragraph [0154] the reference states:

“...as illustrated in FIG. 6A, a Collector/Controller (C/C) 20C of the present invention may include or be functionally associated with Network Analyzer 48 for determining the current packet size and inter-packet interval for a given set of current Network Conditions 42 and a current Transfer Request 46. A Network Analyzer 48 may be implemented by a variety of methods and mechanism, depending upon the requirements for a given Collector/Controller (C/C) 20C. Collector/Controller (C/C) 20C may include of be associated with, for example, a Fuzzy Logic Analyzer 48A, a Neural

Network 48B or a Combined Analyzer 48C including a Fuzzy Logic Analyzer 48CA and a Neural Network 48CB. Each of these implementations will be discussed below but, as each of these methods are well known to those of ordinary skill in the relevant arts, each will be described only briefly."

Moreover, at paragraph [0157] *Bahadiroglu* discloses:

"Neural Networks 48B, in contrast, are specifically developed and designed as systems that may perform many of the same functions as fuzzy logic systems, that is, generating outputs representing decisions based upon input information, but have the capability of "learning", or of being "trained", both initially and over time."

Thus, Applicant respectfully submits that first, a Neural Network is disclosed and not a neural processing module as specifically claimed. Second, the network analyzer does not incorporate the neural network, let alone a neural processing module. Third, there is no disclosure that the neural network processes raw digital data.

Finally, Applicant respectfully submits that the combination of references is improper. The Office Action asserts that it would have been obvious to one of ordinary skill in the art "to use a neural network to process raw information in Bonney's invention to allow for a more accurate network analysis to be performed. [Barilland, col. 4, lines 30-40]" (Emphasis in original.)

First, Applicant respectfully submits that it is not proper to provide a motivation to combine a first reference (*Bonney, et al.*) with a second reference (*Bahadiroglu*) from a third reference (*Barrillaud, et al.*). Moreover, a review of lines 30-40 of *Barrillaud, et al* does not reveal the motivation to combine set forth in the Office Action. Column 4, lines 30-40 of *Bonney, et al.* fail to reveal such a motivation as well. Finally, *Bahadiroglu*, which is a patent publication and has page numbers and not column numbers, describes the benefits of efficient bandwidth and traffic management, but does not disclose or fairly suggest the use of a neural network or neural processing module to effect this desired end. Applicant respectfully submits that the articulated motivation to combine the applied art is without suitable basis and therefore lacks the requisite articulated reasoning



with some rational underpinning to support the legal conclusion of obviousness.

Accordingly, and for at least the reasons set forth above, Applicant respectfully submits that rejection fails to establish a *prima facie* case of obviousness for at least the reasons set forth above. As such, claim 1 is patentable over the applied art.

### **Conclusion**

In view the foregoing, applicant(s) respectfully request(s) that the Examiner withdraw the objection(s) and/or rejection(s) of record, allow all the pending claims, and find the application in condition for allowance.

If any points remain in issue that may best be resolved through a personal or telephonic interview, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Respectfully submitted on behalf of:

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